# UNIVAC 1050 SYSTEM

# DATA TAPE CONVENTIONS

UP 3940.1 Rev. 1

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UNIVAC 1050 SYSTEM DATA TAPE CONVENTIONS

1.0 Label Blocks.

1.1 The first block of each file will be Label Block.

1.2 A file must start at the beginning of a tape.

1.3 If a file exceeds one tape, each succeeding tape will contain a Label Block as the first block. Contained within the Label Block will be a number of the tape within the file.

2.0 End of File Blocks.

2.1 The last data block of a file will be followed by two end of file blocks.

2.2 Where rerun is allowed for, rerun information, bracketed by bypass blocks, may appear between the last data block and the end of file blocks.

3.0 End of Tape Blocks.

3.1 When a file exceeds one tape, each tape except the last will have the last data block followed by two end of tape blocks.

3.2 Where rerun is allowed for, rerun information, bracketed by bypass blocks, may appear between the last data block and the end of tape blocks.

4.0 Bypass Blocks.

4.1 When a file includes information required for rerun, the information will be preceded by a bypass block and followed by a bypass block.

4.2 Two bypass blocks and the rerun information contained between them cannot overlap tapes of a multitape file.

5.0 Data Blocks.

5.1 All blocks, excluding those described in 4.0, which appear after a Label Block and before an end of reel or end of file block are termed data blocks.

6.0 Block Modes.

6.1 UNISERVO IIIA: All blocks will be written in the four character mode.

6.2 UNISERVO IIIC, IVC, and VIC: All blocks will be written or read in the binary mode.

7.0 Block Sizes.

7.1 All blocks in a file, excluding those contained between bypass blocks, will be fixed in size.

7.2 The maximum block size will be 4092 characters.

7.3 The minimum block size for any output file contained in a run when rerun is to be allowed for will be 450 characters.

7.4 The minimum block size will otherwise be limited only by the size of the label block (20-character minimum). Refer to 8.3.

7.5 UNISERVO IIIA: The block size for any file must be a multiple of 4 characters.

8.0 Block Formats.

8.1 All blocks will contain an indication of the block type in the first character.

8.2 All blocks will be counted. All blocks will contain a binary block count in the second through fourth characters.

8.3 Label Blocks.

| Character | |
|---|---|
| 0 | Octal 3 |
| 1-3 | Block Number |
| 4-16 | Tape Label |
| 17-19 | Reel Number |
| 20-n | Unused |

Character 0 will contain an octal 3 which identifies this as a label block.

Characters 1 through 3 will contain the binary block number of this block.

Characters 4 through 16 will contain the tape label.

Characters 17 through 19 will contain the reel number expressed decimally in three characters. Each reel of a multireel file must contain the number of the reel within the file.

Characters 20 through n are unused.

8.4 Data Blocks.

| Character | |
|---|---|
| 0 | Octal 4 |
| 1-3 | Block Number |
| 4-5 | True Data Character Count |
| 6-n | Data (and Fill, if necessary) |

Character 0 will contain an octal 4 which identifies this as a data block.

Characters 1 through 3 will contain the binary block number of this block relative to the first block on the tape.

Characters 4 through 5 will contain a binary count of the number of data characters in the block.

Characters 6 through n will contain data and fill. For UNISERVO IIIA tapes, one to three characters of fill may be required to make the block size a multiple of 4. More fill may be present in the occasional blocks of data when it is desired to write a block which is not yet full.

8.5 Bypass Blocks.

| Character | |
|---|---|
| 0 | Octal 5 |
| 1-3 | Block Number |
| 4-n | Rerun Information |

Character 0 will contain an octal 5 which identifies this as a bypass block.

Characters 1 through 3 will contain the binary block number of this block relative to the first block on the tape.

Characters 4 through n will contain rerun information.

8.6 End of Tape Blocks.

| Character | |
|---|---|
| 0 | Octal 6 |
| 1-3 | Block Number |
| 4-n | Unused |

Character 0 will contain an octal 6 which identifies this block as an end of tape block.

Characters 1 through 3 will contain the binary block number of this block relative to the first block on the tape.

Characters 4 through n are unused.

8.7 End of File Blocks.

| Character | |
|---|---|
| 0 | Octal 7 |
| 1-3 | Block Number |
| 4-n | Unused |

Character 0 will contain an octal 7 which identifies this block as an end of file block.

Characters 1 through 3 will contain the binary block number of this block relative to the first block on the tape.

Characters 4 through n are unused.

8.8 Rerun Information Blocks.

| Character | |
|---|---|
| 0 | Octal 10 |
| 1-3 | Block Number |
| 4-n | Unused |

Character 0 will contain an octal 10 which identifies this block as a rerun information block.

Characters 1 through 3 will contain the binary block number of this block relative to the first block on the tape.

Characters 4 through n will contain rerun information.